



U.S. Department of
Transportation
**National Highway
Traffic Safety
Administration**



Emergency Medical Services:

A Summary of Findings
from NHTSA Surveys

1. Report No.	2. Government Accession No. DOT HS 808 488	3. Recipient's Catalog No.	
4. Title and Subtitle Emergency Medical Services: A Summary of Findings From NHTSA Surveys		5. Report Date July 1996	
		6. Performing Organization Code	
		8. Performing Organization Report No.	
7. Author(s) John M. Boyle, Ph.D.		10. Work Unit No. (TRANS)	
9. Performing Organization Name and Address Schulman, Ronca, and Bucuvalas, Inc. 145 E. 32nd Street, 5th Floor New York, New York 10016 212-779-7700		11. Contract or Grant No. DTNH22-93-D-05135	
		13. Type of Report and Period Covered	
12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Office of Program Development and Evaluation Washington, D.C. 20590		14. Sponsoring Agency Code	
15. Supplementary Notes			
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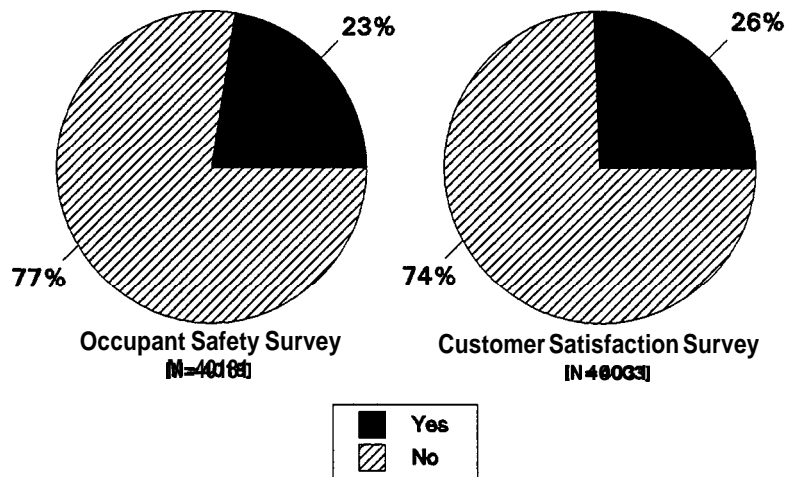
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INJURIES IN VEHICLE CRASHES

Based on results from two **NHTSA** surveys, about one fourth of the population age **16** and older had, at some time in their life, been in a motor vehicle crash in which they received an injury that required medical attention (Figure 1).²

FIGURE 1: CRASH INJURY EXPERIENCE



Qx: Have you ever been injured in a vehicle accident? Only count injuries that required medical attention.

[Base: Total population]

¹ Information about these surveys may be obtained by contacting **NHTSA**.

² The small disparity between the surveys is discussed in Appendix A. All subsequent references to injury in this report refer to the more recent data, from the Customer Satisfaction Survey.

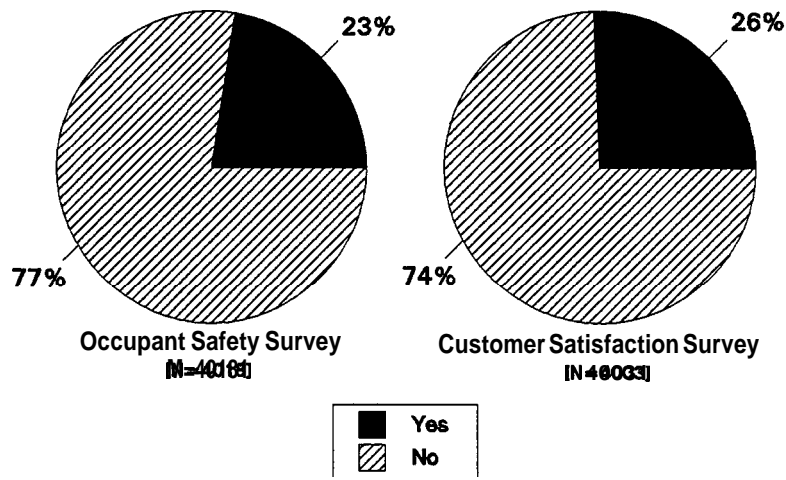
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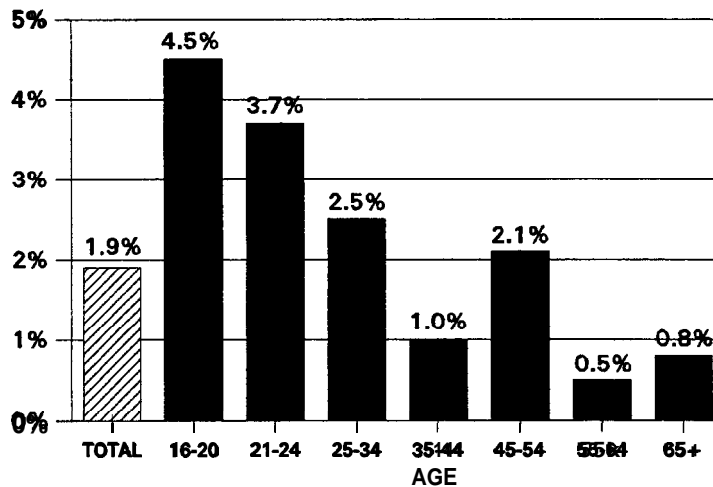
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The prevalence of crash-related injury in the past year is highest among those age **16-20 (4.5%)** and generally declines with age (Figure 3). Comparing the crash injury rates for youth and adults makes the contrast clearer: those age **16-24** were almost three times as likely as those age **25** and older (**4.1%** versus **1.4%**) to have been injured in a motor vehicle crash in the past year.

**FIGURE 3: INJURED IN A VEHICLE CRASH
IN THE PAST YEAR, BY AGE**



Ox: Have you ever been injured in a vehicle crash? Only count injuries that required medical attention.

Ox: How long ago did that (most recent) accident occur?

[Base: Total population; N = 4003]

Source: **NHTSA 1995** Customer Satisfaction Survey

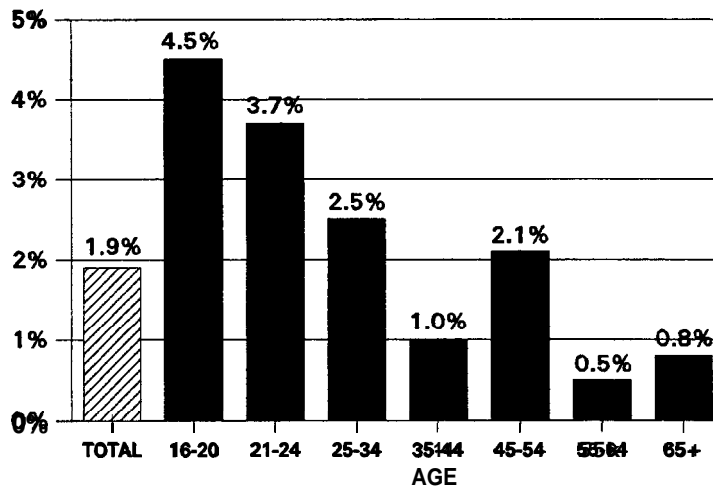
No differences were observed between residents of metropolitan and **non-metropolitan** (rural) areas in lifetime crash injury experience.

WHERE TREATED FOR CRASH-RELATED INJURIES, PAST 5 YEARS

Those who had received a crash-related injury in the past five years that required medical attention were asked to say where they had been treated for the injuries they sustained in the crash. They were given the opportunity to report **more** than one type of treatment site, if they had indeed received treatment for their injuries at more than one place. About three fourths (**74%**) of those who had received a crash-related injury in the past five years that required medical attention had been treated for their injuries at a hospital emergency room/department (Figure 4). About a fourth (**23%**) had been treated at a doctor's office for their injuries, **4%** received medical treatment at the crash scene, and **3%** had gone to a clinic for treatment.

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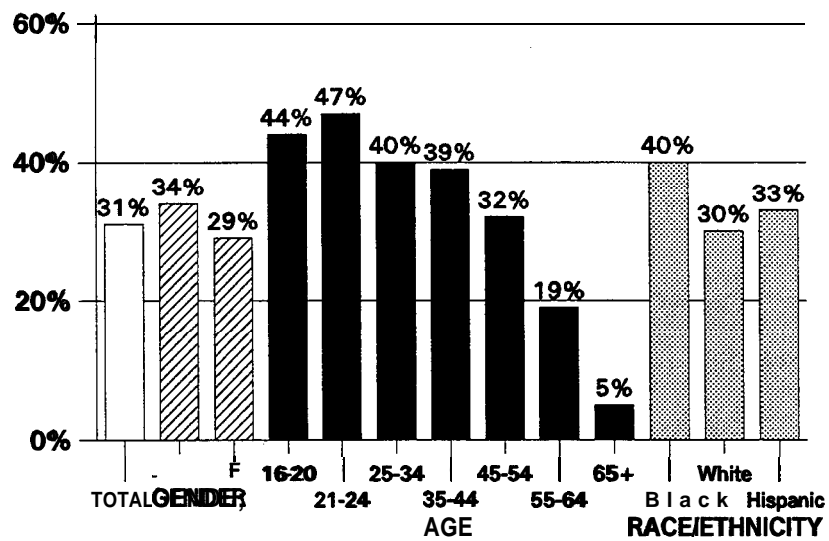
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**FIGURE 5: HAD EMERGENCY TRAINING IN
PAST 5 YEARS, BY DEMOGRAPHICS**

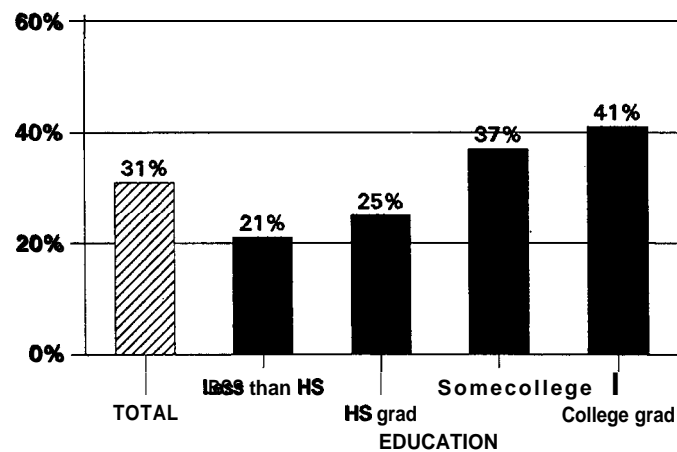


Qx: In the past five years, have you taken any kind of emergency or first aid training?

[Base: Total population; N = 4018]

The higher the level of education a person has completed, the more likely he/she is to have had emergency or first aid training in the past 5 years (Figure 6).

**FIGURE 6: HAD EMERGENCY OR FIRST AID
TRAINING IN PAST 5 YEARS, BY EDUCATION**

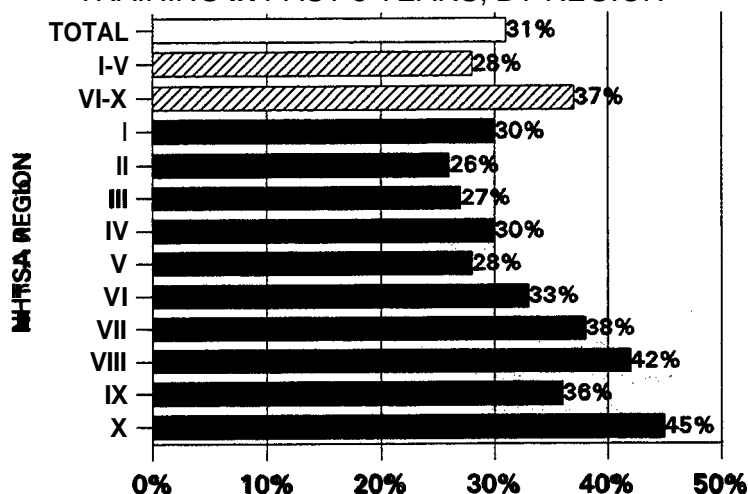


Qx: In the past five years, have you taken any kind of emergency or first aid training?

[Base: Total population; N = 4018]

The likelihood of having received emergency or first aid training varies by geographic region. **NHTSA** segments the states into ten regions for purposes of programmatic outreach (see list of regions below). The data show that the percentage of persons who have received training varies substantially across **NHTSA** regions, ranging from **26%** in Region II to **45%** in Region X (Figure 7). Comparing the five regions in the eastern part of the United States (Regions I-V) with the five regions primarily in the west (VI-X) shows that western residents are more likely than eastern residents (**37%** vs. **28%**) to have received emergency or first aid training in the past 5 years.

FIGURE 7: HAD EMERGENCY OR FIRST AID TRAINING IN PAST 5 YEARS, BY REGION



Qx: In the past five years, have you taken any kind of emergency or first aid training?

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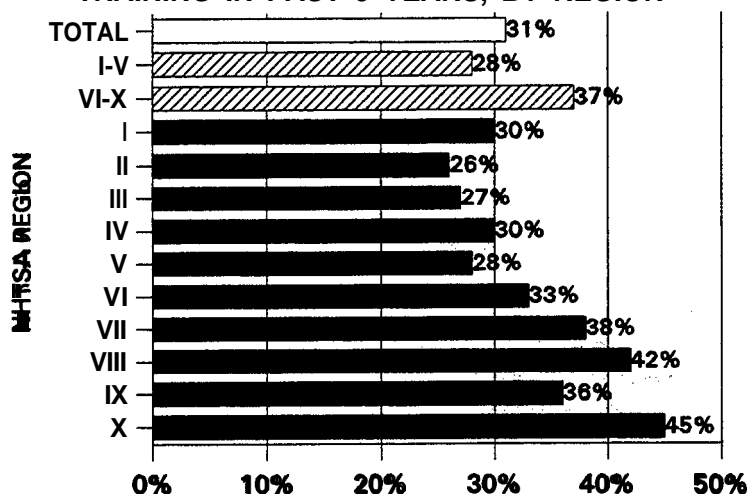
REGION

STATES

I	CT, ME, MA, NH, RI, VT
II	NY, NJ
III	DE, DC, MD, PA, VA, WV
IV	AL, FL, GA, KY, MS, NC, SC, TN
V	IL, IN, MI, MN, OH, WI
VI	AR, LA, NM, OK, TX
VII	IA, KS, MO, NE
VIII	CO, MT, ND, SD, UT, WY
IX	AZ, CA, HI, NV
X	AK, ID, OR, WA

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REGION

STATES

I	CT, ME, MA, NH, RI, VT
II	NY, NJ
III	DE, DC, MD, PA, VA, WV
IV	AL, FL, GA, KY, MS, NC, SC, TN
V	IL, IN, MI, MN, OH, WI
VI	AR, LA, NM, OK, TX
VII	IA, KS, MO, NE
VIII	CO, MT, ND, SD, UT, WY
IX	AZ, CA, HI, NV
X	AK, ID, OR, WA

**TABLE 2: CONCERNS ABOUT STOPPING TO HELP
AT A VEHICLE CRASH, BY GENDER**

Qx: Suppose that you are driving. You see an accident happen and no one is there at the scene to help. What concerns might you have about stopping to help?

[Multiple responses were accepted.]

	TOTAL	MALE	FEMALE
Base (Total population)	4018	1759	2259
No concerns/would stop to help	59%	63%	56%
Personal safety (net)	15%	13%	16%
Concern for own safety	5%	4%	6%
Ploy to hurt innocent people	5%	4%	5%
Fear of contracting disease	3%	3%	3%
Risk of fire, explosion	2%	2%	2%
Depends on time of day/location	2%	1%	2%
Concern for safety of family	1%	< 1 %	1%
Traffic (sub-net)	3%	3%	2%
Being hit by another car	1%	1%	1%
Ability to stop safely in traffic	1%	1%	1%
Other cars' inability to stop	1%	1%	< 1 %
Assistance (net)	12%	9%	15%
Don't know how to help/what to do	8%	6%	10%
Not qualified or able to help	3%	2%	4%
Getting someone else to stop/help	1%	1%	1%
Lawsuits/liability for improper assistance	10%	13%	8%
Victim's safety (net)	8%	9%	8%
Possibility of causing further injury	3%	3%	3%
Extent of injuries	3%	3%	2%
Safety of the injured victim	2%	2%	2%
Depends on seriousness of crash	1%	1%	1%
Other	1%	1%	1%
Don't know/refused/no answer	5%	3%	6%

Overall, blacks are more likely than whites or Hispanics (**70%** vs. **58-59%**) to say they would have no concerns about stopping to help at a crash scene (Table 3).

**TABLE 2: CONCERNS ABOUT STOPPING TO HELP
AT A VEHICLE CRASH, BY GENDER**

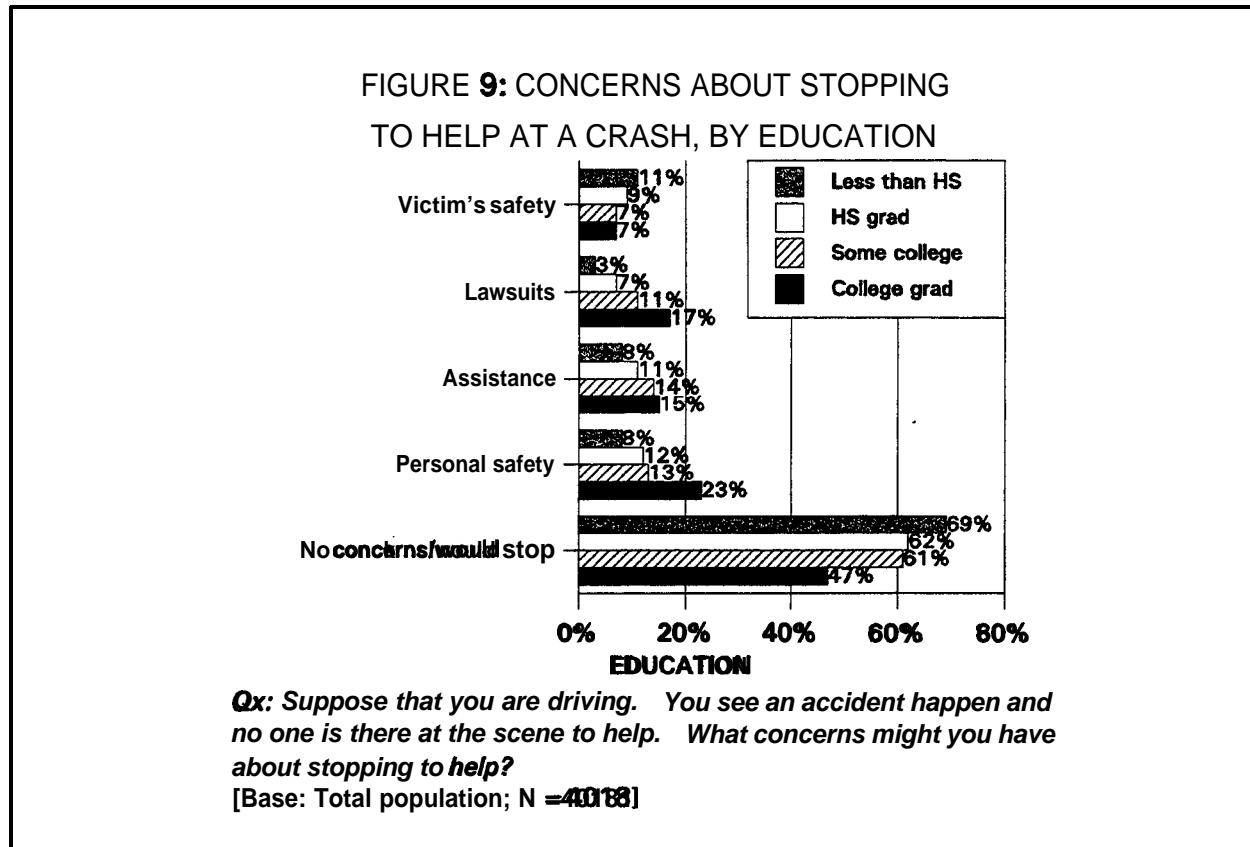
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Overall, blacks are more likely than whites or Hispanics (**70%** vs. **58-59%**) to say they would have no concerns about stopping to help at a crash scene (Table 3).

People with college degrees express greater concerns about stopping and assisting at a crash site than do people with less formal education, despite their being more likely to have received emergency or first aid training. Less than half (**47%**) of college graduates said they would have no concerns and would stop to help, compared to more than **60%** of others (Figure 9). College graduates are more than twice as likely as others to be concerned about the personal safety of themselves or their passengers (**23%** vs. **11%**) and about lawsuits (**17%** vs. **8%**).

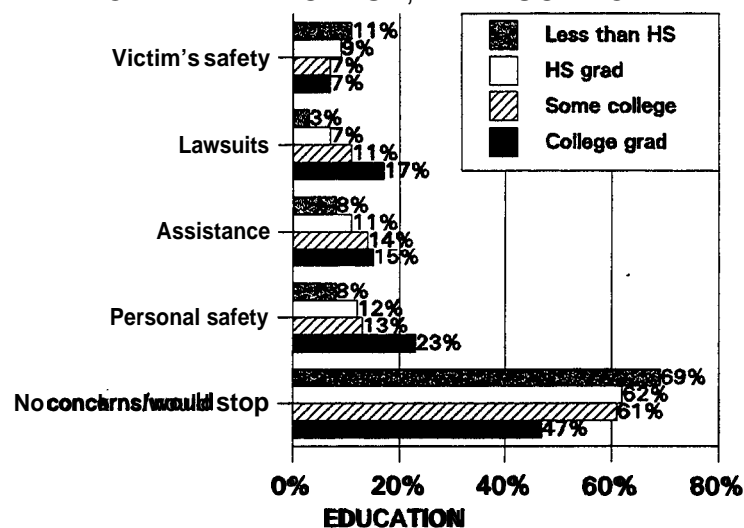


WHAT WOULD PREVENT PEOPLE FROM STOPPING AT A CRASH

The previous section discussed what concerns people **might** have about stopping to help at a crash. This section looks at what they think would actually prevent them from stopping. People who cited one or more concerns about **stopping** at a crash scene were asked which of these concern(s), if any, would most likely prevent them from stopping. Those who did not mention any concerns about stopping were asked if they could think of anything that would prevent them from stopping to help. Table 4 shows the combined results of these two questions. Overall, the concerns that are most likely to prevent people from stopping to help at a crash scene are personal safety and a feeling of being unqualified or unable to help.

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FIGURE 9: CONCERNS ABOUT STOPPING TO HELP AT A CRASH, BY EDUCATION



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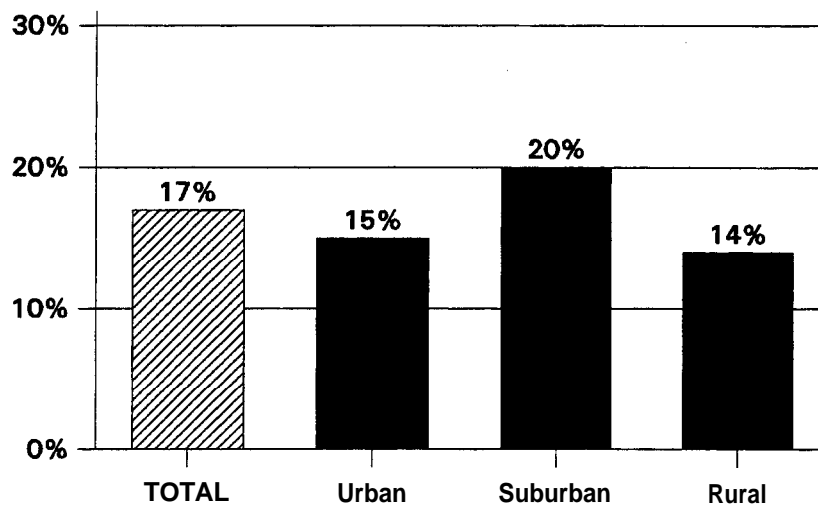
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Concerns that would **prevent** someone from stopping to help at a crash vary by level of education in much the same way as the concerns that one **might** have about stopping. The more formal education someone has, the more likely he/she is to be deterred from stopping by concerns about lawsuits and personal safety.

CELLULAR PHONES

The availability of cellular phones in motor vehicles presents an opportunity for persons to contact EMS personnel more quickly when there has been a crash. One in six drivers (**17%**) currently has a cellular phone in the vehicle they usually drive. Drivers living in suburban areas are more likely than those from urban or rural areas to have a cellular phone in their primary vehicle (Figure 10).

**FIGURE 10: HAVE A CELLULAR PHONE IN
PRIMARY VEHICLE, BY COMMUNITY TYPE**



Qx: Do you have a cellular phone in the car you usually drive?

[Base: Drivers; N = 3685]

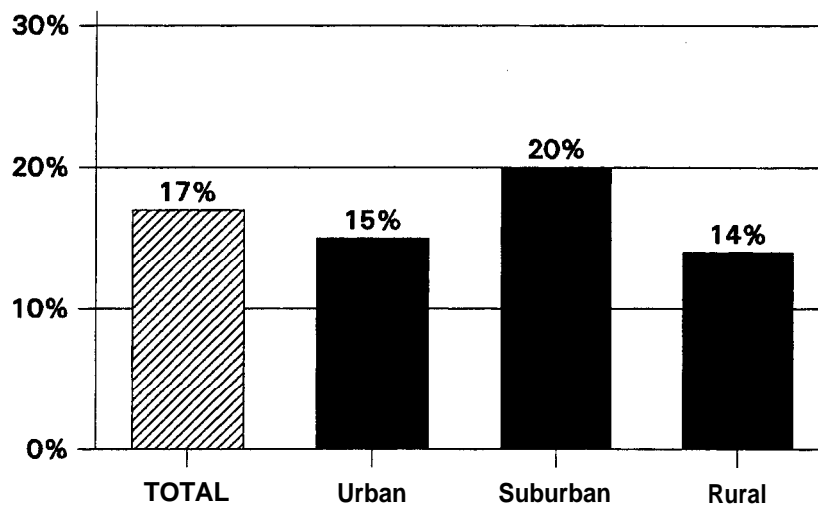
Those between the ages of **25** and **54** are more likely than younger or older people to have a cellular phone in their primary vehicle: about one in five people in this age range has a cellular phone in their vehicle (Figure 11). There is a negligible difference between males and females in the likelihood that they have a cellular phone in the vehicle they usually drive.

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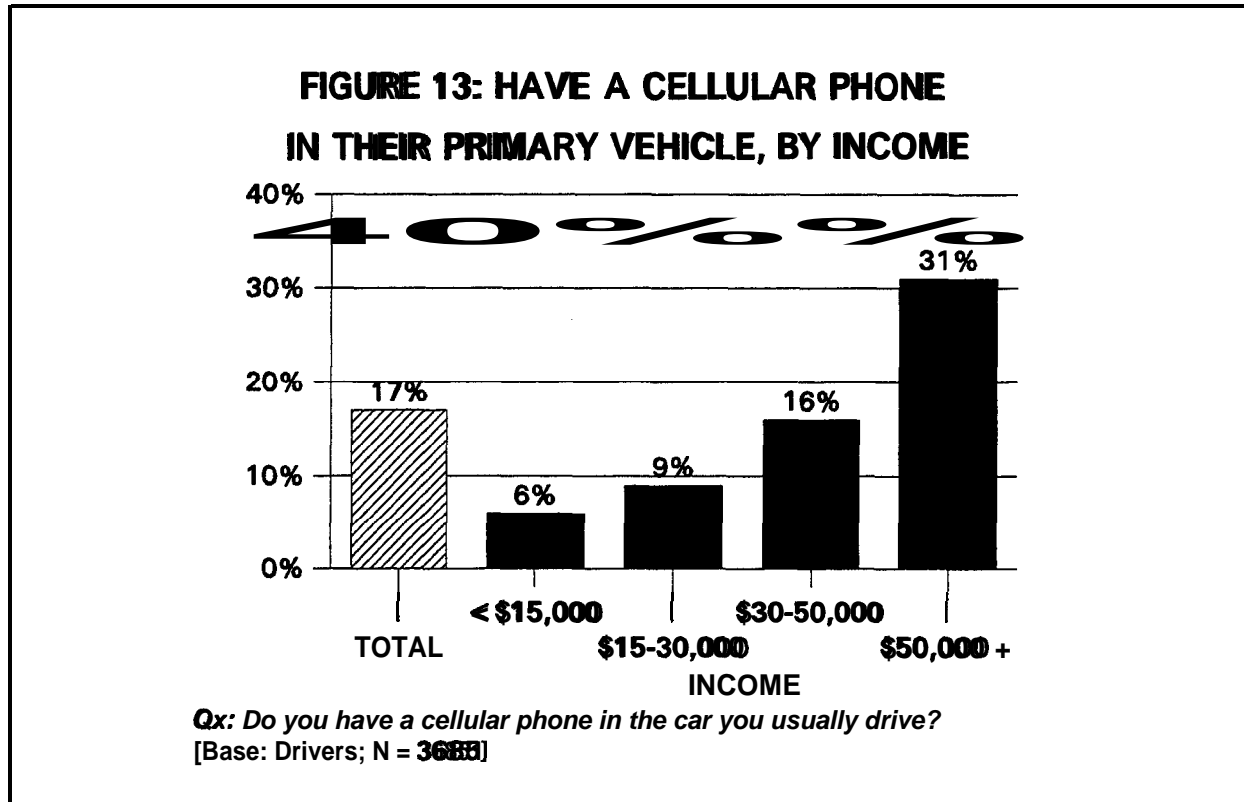


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Nearly one third (**31%**) of drivers in the highest income group (**\$50,000** or more per year) have a cellular phone in the vehicle they usually drive, twice the rate (**16%**) of drivers making **\$30-50,000** per year and more than three times the rate of drivers making less than **\$30,000** per year (Figure 13).

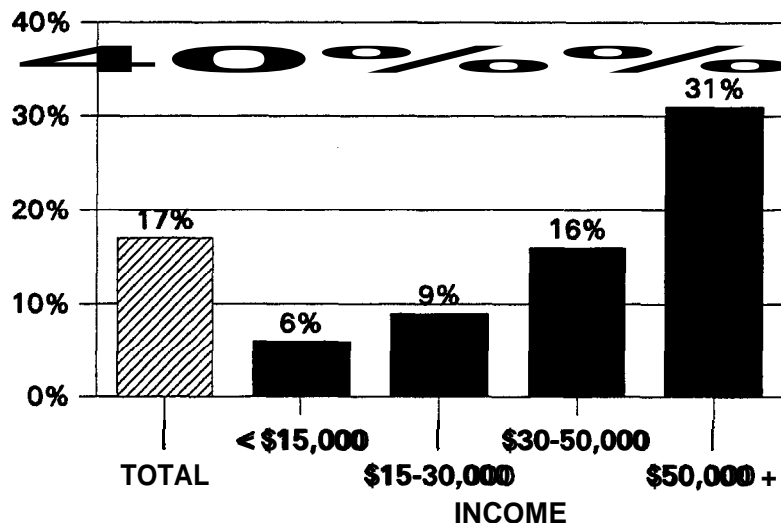


TELEPHONING FOR HELP AT AN INJURY CRASH

If they observed a crash where someone was injured, but were in a situation where it was too dangerous for them to stop and help, most people (**87%**) indicated that **nothing** would prevent them from calling (Table 5). The few who said that something might stop them from calling most often gave unavailability of a telephone as the reason.

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**FIGURE 13: HAVE A CELLULAR PHONE
IN THEIR PRIMARY VEHICLE, BY INCOME**

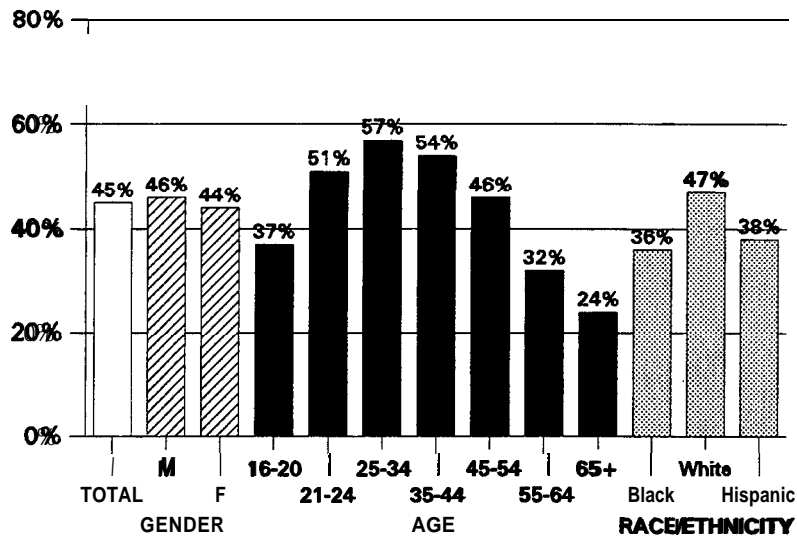


Qx: Do you have a cellular phone in the car you usually drive?
[Base: Drivers; N = 3688]

TELEPHONING FOR HELP AT AN INJURY CRASH

If they observed a crash where someone was injured, but were in a situation where it was too dangerous for them to stop and help, most people (**87%**) indicated that **nothing** would prevent them from calling (Table 5). The few who said that something might stop them from calling most often gave unavailability of a telephone as the reason.

**FIGURE 14: KNOW WHAT INITIALS “EMS”
STAND FOR, BY DEMOGRAPHICS**

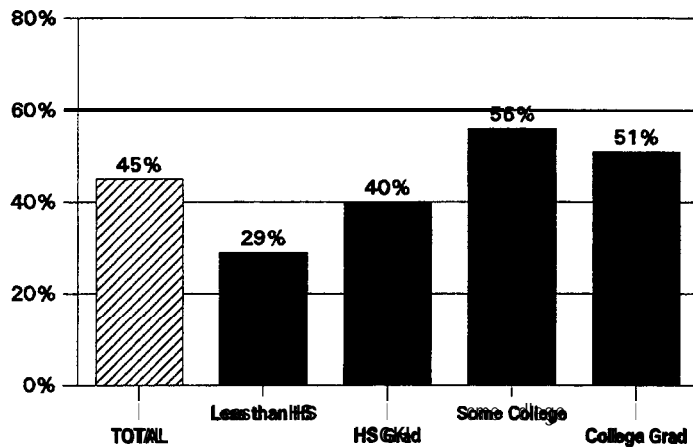


Qx: Can you tell me what the initials “EMS” stand for?”

[Base: Total population; N = 4018]

The highest level of awareness of the initials “EMS,” by education, is among those who have had some college experience but who have not completed a degree program .(Figure 15).

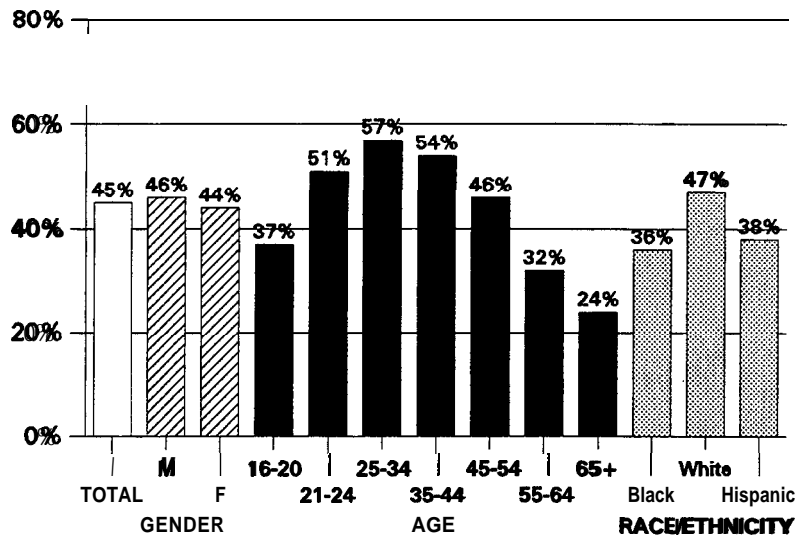
**FIGURE 15: KNOW WHAT INITIALS “EMS”
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Qx: Can you tell me what the initials “EMS ” stand for?”

[Base: Total population; N = 4018]

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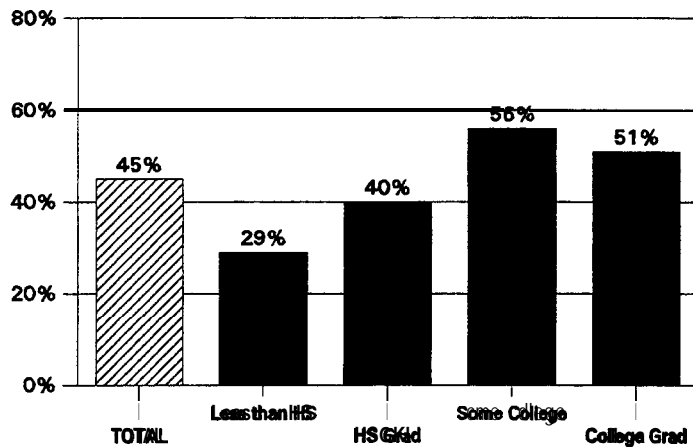


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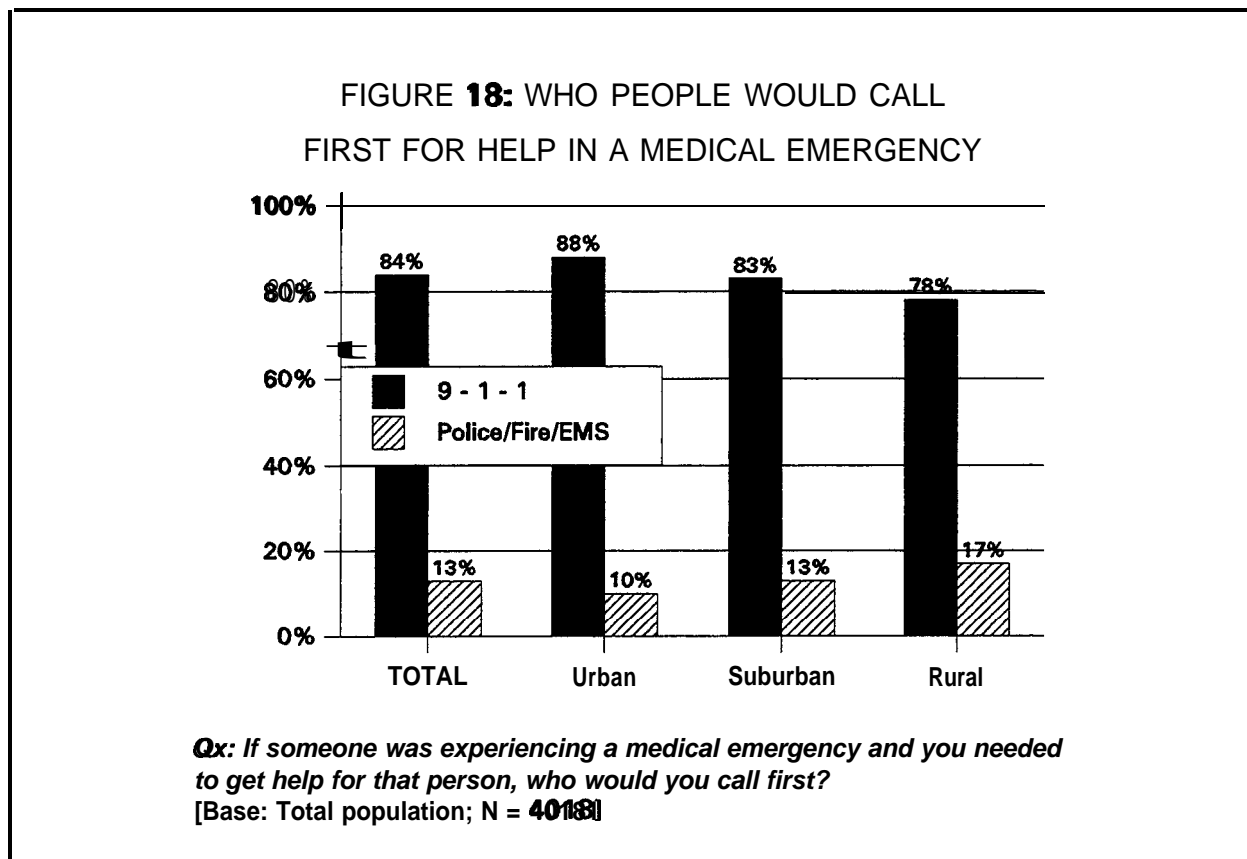


Qx: Can you tell me what the initials “EMS ” stand for?”

[Base: Total population; N = 4018]

TELEPHONING FOR HELP IN A MEDICAL EMERGENCY

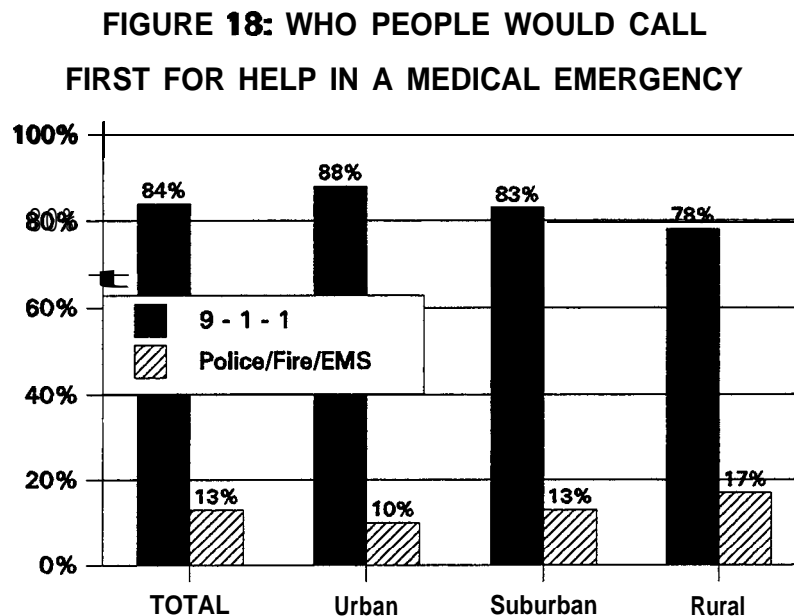
Most people (**84%**) would call **9-1-1** first if they needed to get help for someone who was experiencing a medical emergency (Figure **18**). People who live in urban areas are more likely than residents of suburban or rural areas to call **9-1-1** first.



Even though some people would not call **9-1-1** first to get help for a medical emergency, more than **90%** assert that the **9-1-1** number is available (Figure **19**). Awareness of **9-1-1** is lowest in rural areas which may include portions of the country where the **9-1-1** system is not yet in place or fully operational; however, even in rural areas, **85%** report there is a **9-1-1** number.

TELEPHONING FOR HELP IN A MEDICAL EMERGENCY

Most people (**84%**) would call **9-1-1** first if they needed to get help for someone who was experiencing a medical emergency (Figure 18). People who live in urban areas are more likely than residents of suburban or rural areas to call **9-1-1** first.



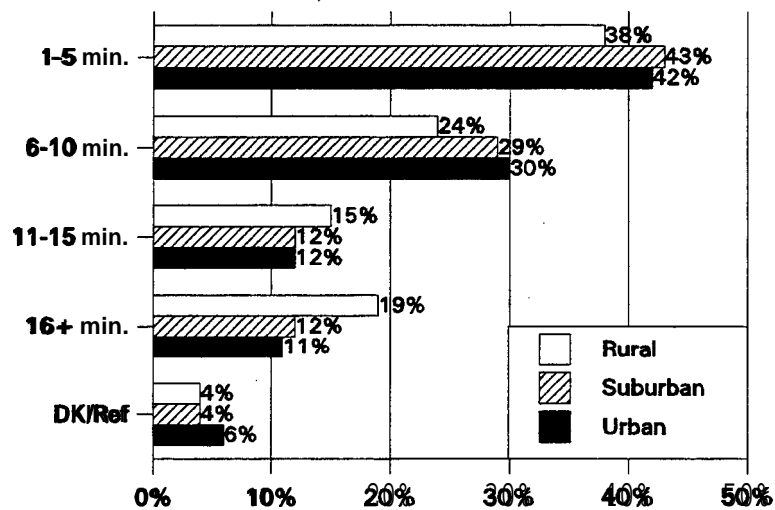
Qx: If someone was experiencing a medical emergency and you needed to get help for that person, who would you call first?

[Base: Total population; N = 4018]

Even though some people would not call **9-1-1** first to get help for a medical emergency, more than **90%** assert that the **9-1-1** number is available (Figure 19). Awareness of **9-1-1** is lowest in rural areas which may include portions of the country where the **9-1-1** system is not yet in place or fully operational; however, even in rural areas, **85%** report there is a **9-1-1** number.

People in rural communities expect the ambulance to take longer to arrive compared to residents of urban or suburban communities (Figure 21). In rural communities, **62%** of the population think an ambulance will arrive within **10** minutes of being called, compared with **72%** of those who live in urban or suburban areas. The average (mean) expected times are **10** minutes for urban and suburban areas and **12** minutes for rural areas.

FIGURE 21: EXPECTED TIME FOR AMBULANCE
TO RESPOND, BY COMMUNITY TYPE

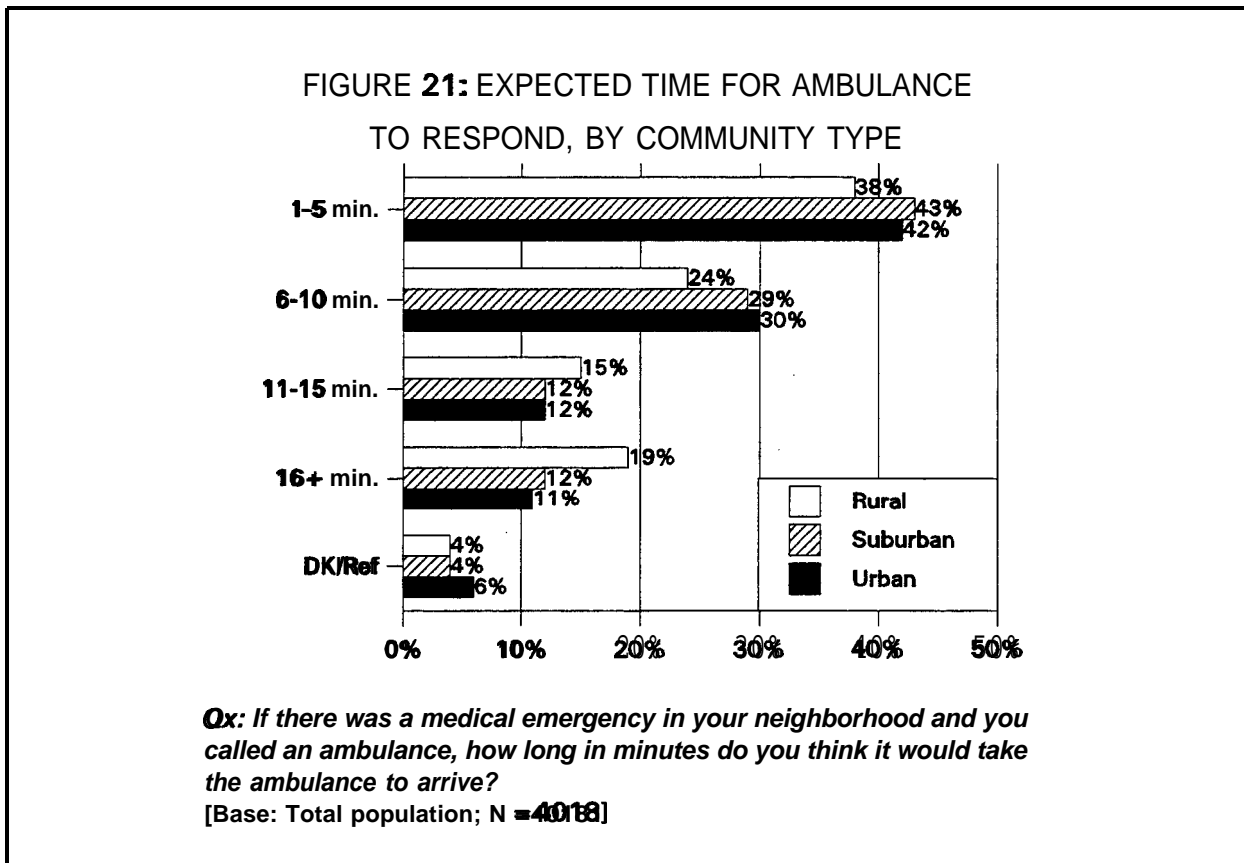


***Qx:** If there was a medical emergency in your neighborhood and you called an ambulance, how long in minutes do you think it would take the ambulance to arrive?*

[Base: Total population; N = 4018]

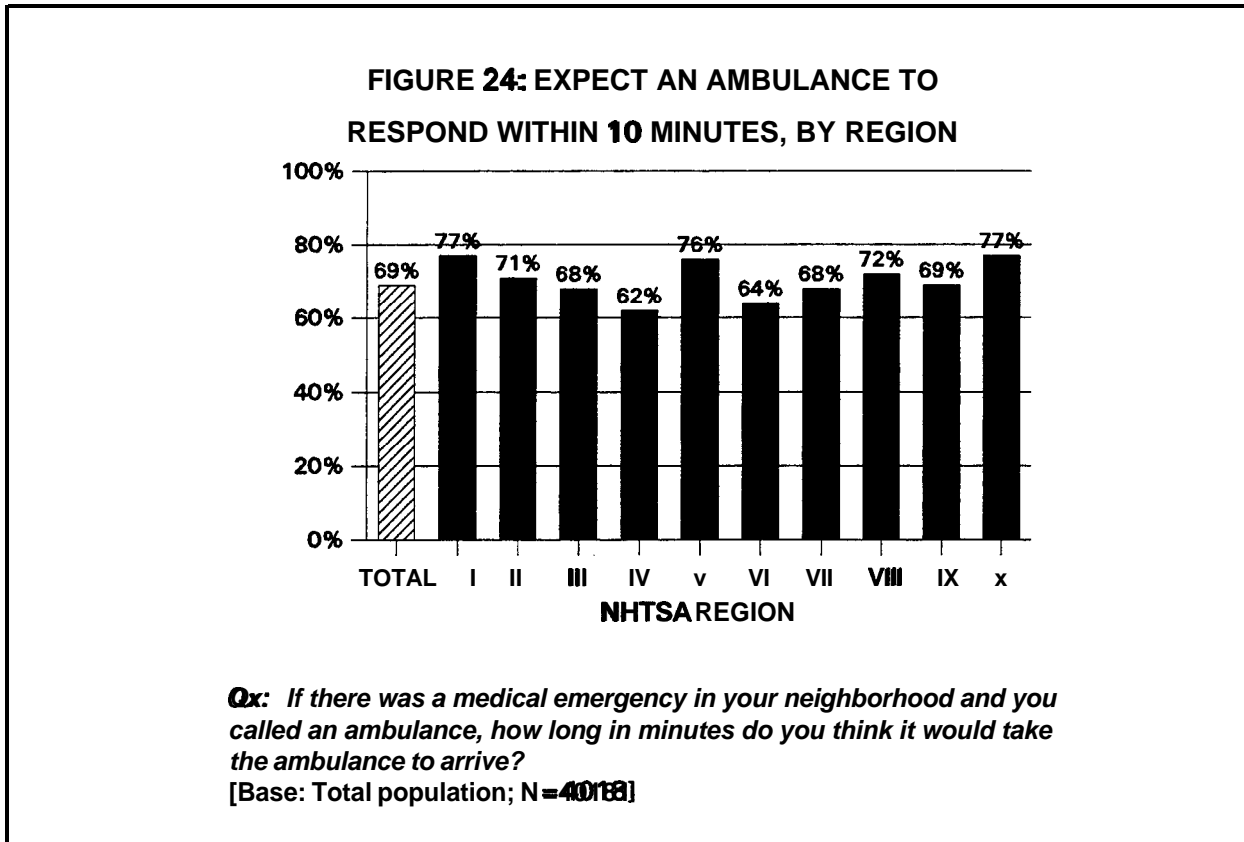
There are differences in expected ambulance response time by race and **ethnicity**. Whites (**45%**) are much more likely than blacks (**28%**) or Hispanics (**30%**) to think that an ambulance will respond in five minutes or less (Figure 22). The differences are somewhat smaller for an expected response time of **10** minutes or less: **71%** of whites think an ambulance will arrive in **10** minutes or less, compared with **63%** of Hispanics and **58%** of blacks.

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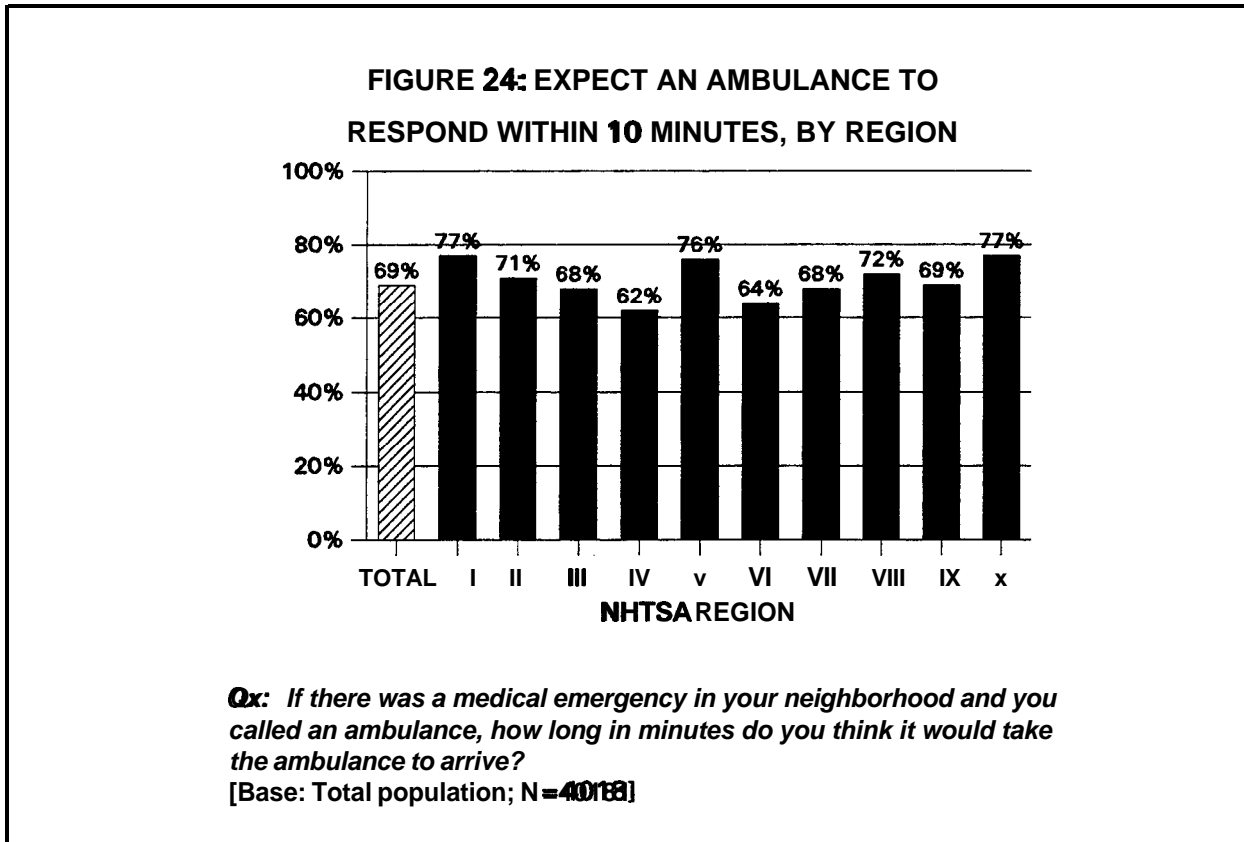
There is also some variation by **NHTSA** region in the expected response time for an ambulance to a medical emergency. The percentage of the driving age public who think an ambulance would arrive within **10** minutes of being called range from **62%** in Region IV to **77%** in Regions I and X (Figure **24**).



CONFIDENCE IN EMERGENCY WORKERS

Two thirds of the driving age public are “very confident” that emergency workers would know what to do in a medical emergency and most other people are “somewhat confident” (Figure **25**). Confidence in emergency workers is highest in urban areas and lowest in rural areas.

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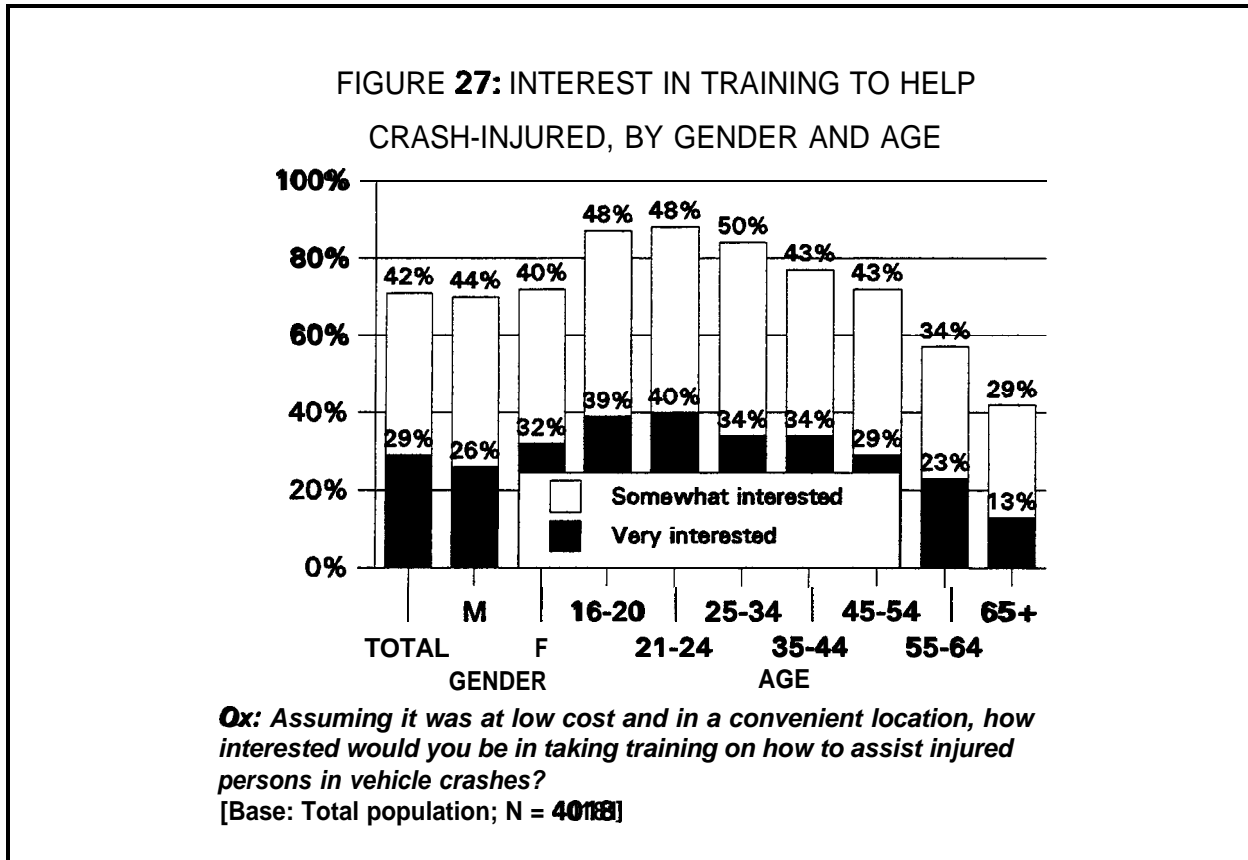


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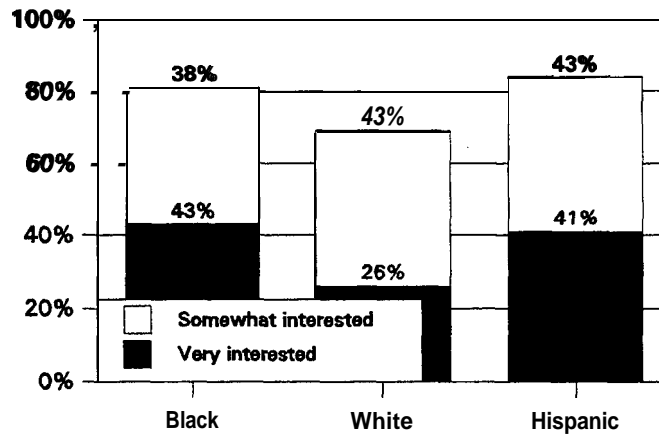
INTEREST IN TRAINING TO ASSIST CRASH VICTIMS

Twenty-nine percent of the driving age public say they would be very interested in training on how to assist injured persons in vehicle crashes (Figure 27). Females are more likely than males (**32%** vs. **26%**) to be very interested in this kind of training. Interest levels generally decline with age.



There are also differences by race and **ethnicity** in the degree of interest in emergency or first aid training to assist crash victims. Blacks (**43%**) and Hispanics (**41%**) are much more likely than whites (**26%**) to say they would be very interested in training to assist persons injured in vehicle crashes (Figure 28).

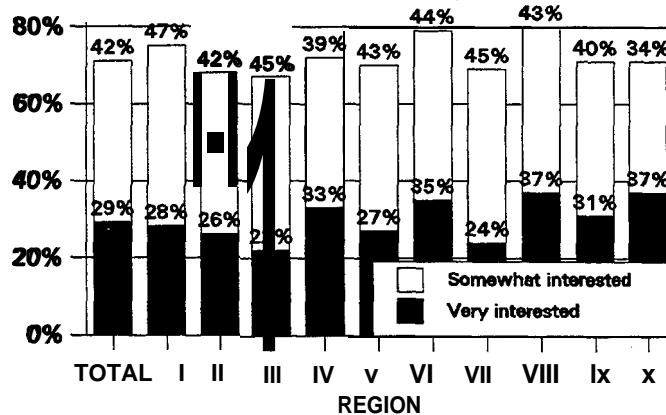
**FIGURE 28: INTEREST IN TRAINING TO HELP
CRASH-INJURED, BY RACE/ETHNICITY**



Qx: Assuming it was at low cost and in a convenient location, how interested would you be in taking training on how to assist injured persons in vehicle crashes?
[Base: Total population; N = 4018]

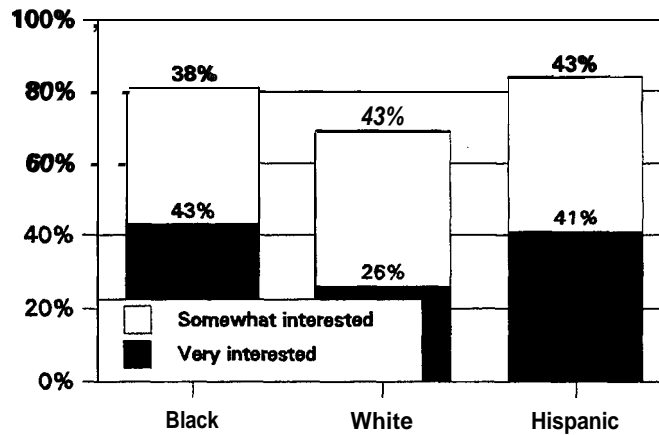
Interest in training to assist crash victims varies by **NHTSA** region. The range of those “very interested” in training extends from **22%** in Region III to **37%** in Regions VIII and X (Figure 29).

**FIGURE 29: INTEREST IN TRAINING TO HELP
PEOPLE INJURED IN CRASHES, BY REGION**



Qx: Assuming it was at low cost and in a convenient location, how interested would you be in taking training on how to assist injured persons in vehicle crashes?
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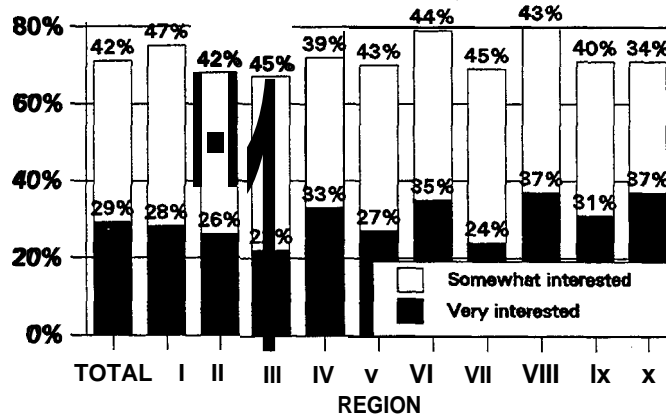
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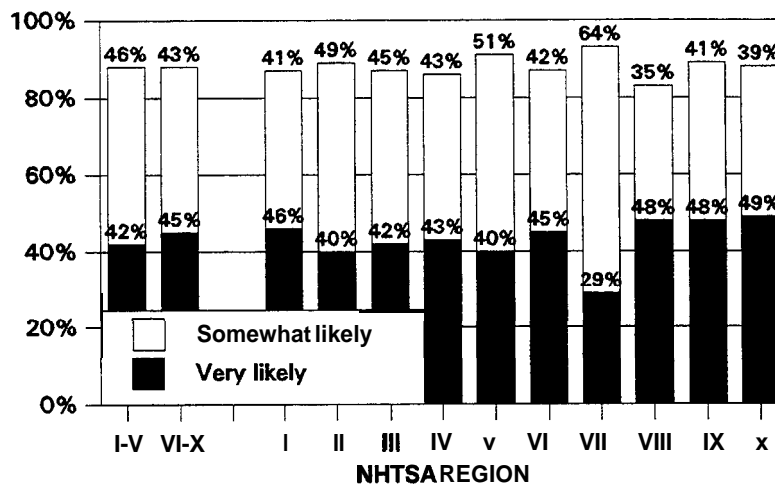
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FIGURE 31: LIKELIHOOD THOSE INTERESTED
WOULD TAKE A 2-4 HR. CLASS, BY REGION



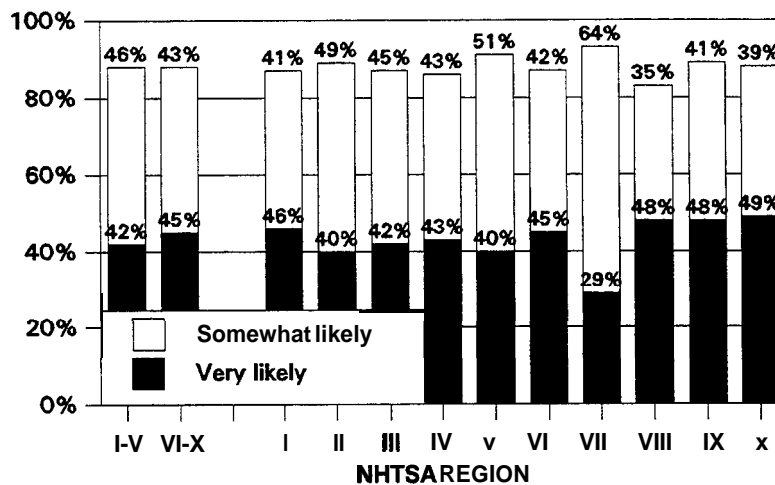
Ox: If the training took two to four hours in a single class session, how likely would you be to take such a class?

[Base: Very or somewhat interested in training to assist people injured in crashes; N = 3001]

CONCLUSIONS

- 1) The survey data show the vast impact of crash injury on the general population: about one in four persons age **16** and older have at some time in their lives received medical attention for injuries incurred in motor vehicle crashes. The extensive number of crash injuries occurring on the nation's roadways underscores not only the importance of a strong and efficient Emergency Medical System, but also the importance for the public to possess basic emergency and first aid skills that can be applied at crash scenes.
- 2) In general, the survey results disclosed widespread awareness of the **9-1-1** emergency telephone number, and confidence among much of the population in the responding capabilities of the EMS. Many persons also express a willingness to stop and assist at crash scenes where someone is injured. However, many persons may not be adequately skilled to do so as fewer than one third of the public have received emergency or first aid training in the past five years.
- 3) The data suggest that it will take more than training the public in basic injury treatment procedures to achieve the full benefits desired from this

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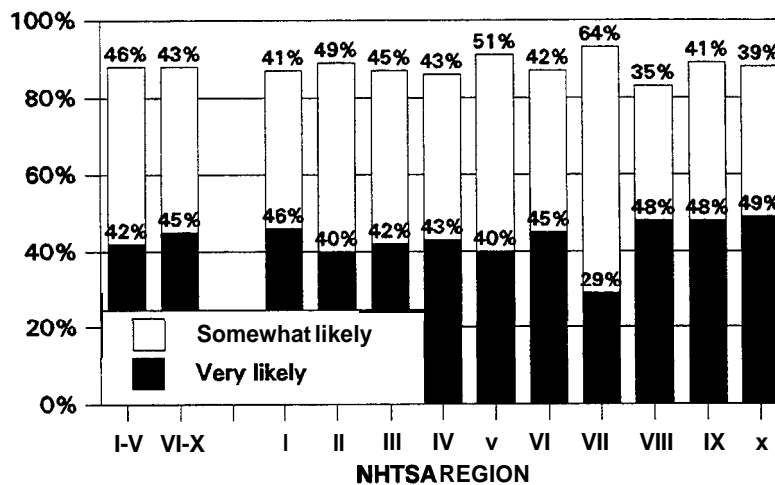
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